



May 19, 2010

Duke Energy
Miami Fort Generating Station
11021 Brower Road
North Bend, OH 45052

Attention: Ms. Sue Wallace
Chemical Engineer

Re: Results – **May 2010**
Low-Level Mercury Sampling
Miami Fort Generating Station
North Bend, Ohio

In accordance with your request, URS prepared the following letter report transmitting low-level mercury test results for samples collected at the Miami Fort Generating Station located in North Bend, Ohio.

The scope of work involved the sampling of intake and discharge waters from the following sources and analysis of those samples for low-level mercury.

1. River Intake
2. Station 601 (WWT Influent)
[Samples were collected at this station one detention time before samples collected at Outfall 608]
3. Outfall 608 (WWT Effluent)
[Samples were collected at this outfall one detention time after samples collected at station 601]
4. Outfall 002 (Pond B Discharge)

Each sample was collected following the required Method 1669: *Sampling Ambient Water for Determination of Trace Metals at EPA Water Quality Criteria Levels* (Sampling Method) and analyzed by Method 1631. At the request of Duke Energy, total metal mercury samples were collected from Station 601 and analyzed by Method 7470A.

Field staff from URS' Cincinnati office conducted the sampling and TestAmerica Laboratories Inc. located in North Canton, Ohio performed the analytical procedures. The analytical procedures included the analyses of a collected sample and duplicate sample (duplicates collected at Outfall 608 and Outfall 002), field blank (field blanks collected at the River Intake, Outfall 608, and Outfall 002), and trip blank.



Duke Energy - MFS
May 19, 2010
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The results from the **May 3 and 4, 2010** sampling event are presented in the attached Table 1. A copy of the laboratory report is enclosed with this letter.

--ooOoo--

URS is pleased to provide continued assistance to Duke Energy in the execution of their environmental monitoring requirements. If there are any questions regarding the content of this report, please do not hesitate to contact the undersigned.

Sincerely,

URS Corporation

A handwritten signature in blue ink, appearing to read "Michael A. Wagner", is positioned above the printed name.

Michael A. Wagner
Project Manager

A handwritten signature in blue ink, appearing to read "Dennis P. Connair", is positioned above the printed name.

Dennis P. Connair, C.P.G.
Principal

MAW/DPC/Duke Energy-MFS LL Hg 2010
Job No. 14948701

TABLE 1
ANALYTICAL RESULTS
LOW-LEVEL MERCURY
RIVER INTAKE, STATION 601, OUTFALL 608, AND OUTFALL 002 (POND B)
DUKE ENERGY - MIAMI FORT STATION
NORTH BEND, OHIO

Sample ID	Date Sampled / Results (ng/L, parts per trillion)						
	7/1/09	8/3/09	9/1/09	9/21/09	10/1/09	11/2/09	12/1/09
River Intake	2.3	8.6 B	2.0	NSC	2.3	4.0	1.2
Station 601 (7)	224,000	226,000	NSC	62,400	186,000	NSC	51,400
Station 601 (7)*	NSC	4,600*	58,200*	8,900*	374,000*	NSC	41,300*
Station 601 (7)* [duplicate]	NSC	NSC	NSC	NSC	381,000*	NSC	42,500*
Station 601 (8)	260,000	956,000	NSC	73,000	237,000	576,000	48,600
Station 601 (8)*	NSC	4,800*	172,000*	314,000*	447,000*	124,000*	40,900*
Station 601 (8)*[duplicate]	NSC	NSC	NSC	41,600*	NSC	111,000*	NSC
Outfall 608	110	123 B	63.4	57.7	79.2	183	46.5
Outfall 608 [duplicate]	108	122 B	62.2	58.2	87.1	342	47.0
APB-002	NC	5.8	2.5	NSC	3.6	4.8	6.2
APB-002 [duplicate]	NC	5.3	2.4	NSC	3.8	4.5	5.6
Field Blank (RI-FB)	<0.50	2.8	<0.50	NSC	<0.50	<0.50	0.5
Field Blank (WWT-FB)	<0.50	1.0	0.72	<0.50	0.89	0.62	<0.50
Field Blank (AP-FB)	NC	<0.50	<0.50	NSC	<0.50	<0.50	<0.50
Trip Blank	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Samples collected by URS

Samples analyzed by TestAmerica of North Canton, Ohio

NC - Not Collected. (Ash Pond B Outfall 002 collected quarterly, August and December)

NSC - No Sample Collected [11/2/09 Unit 7 outage]

* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]

B = Low-level mercury detected in associated field blank collected at sampling location

TABLE 1 (continued)

Sample ID	Date Sampled / Results (ng/L, parts per trillion)					
	1/4/10	2/1/10	3/1/10	4/1/10	5/3/10	6/xx/10
River Intake	3.9	14.4	2.8	5.6	7.7	
Station 601 (7)	NSC	350,000	NSC	290,000	416,000	
Station 601 (7)*	NSC	233,000*	NSC	342,000*	408,000*	
Station 601 (7)* [duplicate]	NSC	NSC	NSC	354,000*	NSC	
Station 601 (8)	470,000	416,000	291,000	75,200	220,000	
Station 601 (8)*	8,100*	418,000*	921,000*	405,000*	325,000*	
Station 601 (8)*[duplicate]	3,100*	371,000*	688,000*	NSC	328,000*	
Outfall 608	53.0	301	286	71.2	292	
Outfall 608 [duplicate]	41.5	302	282	74.8	278	
APB-002	4.3	3.8	4.3	5.8	2.4	
APB-002 [duplicate]	6.0	4.1	3.4	5.6	2.3	
Field Blank (RI-FB)	<0.50	<0.50	<0.50	2.4	<0.50	
Field Blank (WWT-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	
Field Blank (AP-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	
Trip Blank	<0.50	<0.50	<0.50	<0.50	<0.50	

Samples collected by URS

Samples analyzed by TestAmerica of North Canton, Ohio

NSC - No Sample Collected [1/4/10 no flow from Unit 7] [3/1/10 no flow from Unit 7]

* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]

ANALYTICAL REPORT

REVISED

PROJECT NO. 14948701.00100

MIAMI FORT STN. LLHG SAMP.

Lot #: A0E050579

Sue Wallace

Duke Energy Corporation
PO Box 5385
Cincinnati, OH 45201

TESTAMERICA LABORATORIES, INC.



Kenneth J. Kuzior
Project Manager
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Approved for release.
Kenneth J. Kuzior
Project Manager
5/19/2010 11:38 AM

May 19, 2010

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 www.testamericainc.com



CASE NARRATIVE

A0E050579

The following report contains the analytical results for thirteen water samples and one quality control sample submitted to TestAmerica North Canton by Cinergy from the Miami Fort Stn. LLHG Samp. Site, project number 14948701.00100. The samples were received May 05, 2010, according to documented sample acceptance procedures.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Candance Bonham, Mike Wagner, and Sue Wallace on May 13, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the reporting limit.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kenneth J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 18.6°C.

See TestAmerica's Cooler Receipt Form for additional information.

METALS

Matrix spike recovery and relative percent difference (RPD) data were not calculated for some analytes for 608 WWT due to the sample concentration reading greater than four times the spike amount. See the Matrix Spike Report for the affected analytes which will be flagged with "NC, MSB".

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the reparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

<u>Volatile (GC or GC/MS)</u>	<u>Semivolatile (GC/MS)</u>	<u>Metals ICP-MS</u>	<u>Metals ICP Trace</u>
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

QUALITY CONTROL ELEMENTS NARRATIVE (continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.
- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the reparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.



TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit

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EXECUTIVE SUMMARY - Detection Highlights

A0E050579

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
601 WWT(7) 05/03/10 18:15 001				
Mercury	416000	20000	ng/L	CFR136A 1631E
601 WWT(8) 05/03/10 18:30 002				
Mercury	220000	20000	ng/L	CFR136A 1631E
601 WWT(7)TOT 05/03/10 18:20 003				
Mercury	408	20.0	ug/L	SW846 7470A
601 WWT(8)TOT-DUP 05/03/10 18:40 004				
Mercury	328	20.0	ug/L	SW846 7470A
601 WWT(8)TOT 05/03/10 18:35 005				
Mercury	325	20.0	ug/L	SW846 7470A
RI 05/03/10 18:00 007				
Mercury	7.7	0.50	ng/L	CFR136A 1631E
608 WWT 05/04/10 08:20 009				
Mercury	292	10.0	ng/L	CFR136A 1631E
608 WWT DUP 05/04/10 08:25 010				
Mercury	278	10.0	ng/L	CFR136A 1631E
OUTFALL 002 05/04/10 09:05 012				
Mercury	2.4	0.50	ng/L	CFR136A 1631E
OUTFALL 002 DUP 05/04/10 09:10 013				
Mercury	2.3	0.50	ng/L	CFR136A 1631E

ANALYTICAL METHODS SUMMARY

A0E050579

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Mercury, Low Level Mercury, CVA Fluorescence	CFR136A 1631E

References:

- CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0E050579

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L03EM	001	601 WWT (7)	05/03/10	18:15
L03ER	002	601 WWT (8)	05/03/10	18:30
L03ET	003	601 WWT (7) TOT	05/03/10	18:20
L03EW	004	601 WWT (8) TOT-DUP	05/03/10	18:40
L03EX	005	601 WWT (8) TOT	05/03/10	18:35
L03E0	006	RI FB	05/03/10	17:50
L03E1	007	RI	05/03/10	18:00
L03E2	008	608 WWT FB	05/04/10	08:15
L03E3	009	608 WWT	05/04/10	08:20
L03E4	010	608 WWT DUP	05/04/10	08:25
L03E5	011	OUTFALL 002 FB	05/04/10	09:00
L03E8	012	OUTFALL 002	05/04/10	09:05
L03FA	013	OUTFALL 002 DUP	05/04/10	09:10
L03FC	014	TRIP BLANK	05/04/10	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Duke Energy Corporation

Client Sample ID: 601 WWT(7)

TOTAL Metals

Lot-Sample #...: A0E050579-001

Matrix.....: WG

Date Sampled...: 05/03/10 18:15 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	416000	20000	ng/L	CFR136A 1631E	05/10-05/12/10	L03EM1AA
		Dilution Factor: 40000				

Duke Energy Corporation

Client Sample ID: 601 WWT(8)

TOTAL Metals

Lot-Sample #...: A0E050579-002

Matrix.....: WG

Date Sampled...: 05/03/10 18:30 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 0130273						
Mercury	220000	20000	ng/L	CFR136A 1631E	05/10-05/12/10	L03ER1AA
		Dilution Factor: 40000				

Duke Energy Corporation

Client Sample ID: 601 WWT(7)TOT

TOTAL Metals

Lot-Sample #...: A0E050579-003

Matrix.....: WG

Date Sampled...: 05/03/10 18:20 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 0126029						
Mercury	408	20.0	ug/L	SW846 7470A	05/06-05/07/10	L03ET1AA
		Dilution Factor: 100				

Duke Energy Corporation

Client Sample ID: 601 WWT(8)TOT-DUP

TOTAL Metals

Lot-Sample #...: A0E050579-004

Matrix.....: WG

Date Sampled...: 05/03/10 18:40 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0126029						
Mercury	328	20.0	ug/L	SW846 7470A	05/06-05/07/10	L03EW1AA
		Dilution Factor: 100				

Duke Energy Corporation

Client Sample ID: 601 WWT(8)TOT

TOTAL Metals

Lot-Sample #...: A0E050579-005

Matrix.....: WG

Date Sampled...: 05/03/10 18:35 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0126029						
Mercury	325	20.0	ug/L	SW846 7470A	05/06-05/07/10	L03EX1AA
		Dilution Factor: 100				

Duke Energy Corporation

Client Sample ID: RI FB

TOTAL Metals

Lot-Sample #...: A0E050579-006

Matrix.....: WQ

Date Sampled...: 05/03/10 17:50 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	ND	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03E01AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: RI

TOTAL Metals

Lot-Sample #...: A0E050579-007

Matrix.....: WG

Date Sampled...: 05/03/10 18:00 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	7.7	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03E11AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: 608 WWT FB

TOTAL Metals

Lot-Sample #...: A0E050579-008

Matrix.....: WQ

Date Sampled...: 05/04/10 08:15 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	ND	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03E21AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: 608 WWT

TOTAL Metals

Lot-Sample #...: A0E050579-009

Matrix.....: WG

Date Sampled...: 05/04/10 08:20 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	292	10.0	ng/L	CFR136A 1631E	05/10-05/12/10	L03E31AA
		Dilution Factor: 20				

Duke Energy Corporation

Client Sample ID: 608 WWT DUP

TOTAL Metals

Lot-Sample #...: A0E050579-010

Matrix.....: WG

Date Sampled...: 05/04/10 08:25 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	278	10.0	ng/L	CFR136A 1631E	05/10-05/12/10	L03E41AA
		Dilution Factor: 20				

Duke Energy Corporation

Client Sample ID: OUTFALL 002 FB

TOTAL Metals

Lot-Sample #...: A0E050579-011

Matrix.....: WQ

Date Sampled...: 05/04/10 09:00 Date Received...: 05/05/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	0130273					
Mercury	ND	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03E51AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002

TOTAL Metals

Lot-Sample #...: A0E050579-012

Matrix.....: WG

Date Sampled...: 05/04/10 09:05 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	2.4	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03E81AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: OUTFALL 002 DUP

TOTAL Metals

Lot-Sample #...: A0E050579-013

Matrix.....: WG

Date Sampled...: 05/04/10 09:10 Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	2.3	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03FA1AA
		Dilution Factor: 1				

Duke Energy Corporation

Client Sample ID: TRIP BLANK

TOTAL Metals

Lot-Sample #...: A0E050579-014

Matrix.....: WQ

Date Sampled...: 05/04/10

Date Received...: 05/05/10

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Prep Batch #...: 0130273						
Mercury	ND	0.50	ng/L	CFR136A 1631E	05/10-05/12/10	L03FC1AA
		Dilution Factor: 1				

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A0E050579

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A0E060000-029 Prep Batch #...: 0126029						
Mercury	ND	0.20	ug/L	SW846 7470A	05/06-05/07/10	L03VL1AU
Dilution Factor: 1						

MB Lot-Sample #: A0E100000-273 Prep Batch #...: 0130273						
Mercury	ND	0.50	ng/L	CFR136A 1631E	05/10-05/11/10	L093V1AA
Dilution Factor: 1						

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: A0E050579

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
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LCS Lot-Sample#:	A0E060000-029	Prep Batch #....:	0126029		
Mercury	108	(81 - 123)	SW846 7470A	05/06-05/07/10	L03VL1CR
		Dilution Factor:	1		

LCS Lot-Sample#:	A0E100000-273	Prep Batch #....:	0130273		
Mercury	96	(77 - 125)	CFR136A 1631E	05/10-05/11/10	L093V1AC
		Dilution Factor:	1		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A0E050579

Matrix.....: WATER

Date Sampled...: 05/05/10 08:25 Date Received...: 05/05/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0E050506-001 Prep Batch #... : 0126029							
Mercury	95	(69 - 134)			SW846 7470A	05/06-05/07/10	L02QV1CJ
	93	(69 - 134)	1.8	(0-20)	SW846 7470A	05/06-05/07/10	L02QV1CK
Dilution Factor: 1							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A0E050579

Matrix.....: WG

Date Sampled...: 05/04/10 08:20 Date Received...: 05/05/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0E050579-009 Prep Batch #...: 0130273							
Mercury	NC,MSB	(71 - 125)			CFR136A 1631E	05/10-05/12/10	L03E31AC
	NC,MSB	(71 - 125)		(0-24)	CFR136A 1631E	05/10-05/12/10	L03E31AD
Dilution Factor: 20							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD may be outside control limits because the sample amount was greater than 4X the spike amount.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A0E050579

Matrix.....: WATER

Date Sampled...: 05/05/10 15:35 Date Received...: 05/05/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A0E060548-009 Prep Batch #...: 0130273							
Mercury	89	(71 - 125)			CFR136A 1631E	05/10-05/12/10	L05AE1AP
	97	(71 - 125)	6.0	(0-24)	CFR136A 1631E	05/10-05/12/10	L05AE1AQ
Dilution Factor: 5							

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Chain of Custody Record

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

Client Contact				Client Project Manager				Site Contact				Lab Contact				TestAmerica Laboratories, Inc.			
Company Name:				M-WAGNER				SUE WALLACE				COC No:							
Address:				Telephone:				Telephone:				Telephone:							
City/State/Zip:				513 651-3440				513 467 4905				1 of 2 COCs							
Name:				mike.wagner@uscorp.com				TAT if different from below: <u>STANDARD</u>				Analyses							
Project Name:				Method of Shipment/Carrier:				TAT if different from below: <u>STANDARD</u>				Sample Specific Notes / Special Instructions:							
Project Number:				Shipping/Tracking No:				TAT if different from below: <u>STANDARD</u>				Sample Specific Notes / Special Instructions:							
PO #				14948701-00100				TAT if different from below: <u>STANDARD</u>				Sample Specific Notes / Special Instructions:							
Sample Identification	Sample Date	Sample Time	Sample	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc	NaOH	Unpres	Other:			
601 WWT (7)	5-3-10	1815	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
601 WWT (8)	1830	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
601 WWT (7) TOT	1820	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
601 WWT (8) TOT	1840	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
601 WWT (8) TOT	1835	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
RI FB	1750	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
RI	1800	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
608 WWT FB	5-4-10	0815	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
608 WWT	0820	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
608 WWT DUP	0825	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Possible Hazard Identification
☐ Not-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Special Instructions/QC Requirements & Comments:

* POTENTIALLY ELEVATED Hg IN 601 SAMPLES

Relinquished by: John D. K Date/Time: 05-04-10 11:30 Company: Test America
 Relinquished by: Mike Wagner Date/Time: 5-4-10 12:30 Company: Test America
 Relinquished by: Mike Wagner Date/Time: 5-5-10 9:15 Company: Test America

Chain of Custody Record

TESTAMERICA

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:

Regulatory program:

Other

RCRA

NPDES

DW

TestAmerica Laboratories, Inc.

COC No:

2 of 2 COCs

Lab Contact:

Telephone:

Analyses:

Sample Specific Notes / Special Instructions:

Long lead Hg

Site Contact:

Telephone:

Client Project Manager:

Telephone:

City/State/Zip:

Project Name:

Project Number:

PO #

Method of Shipment/Carrier:

Shipping/Tracking No:

Sample Identification

Sample Date

Sample Time

Other:

NaOH

HCl

HNO3

H2SO4

Other:

Solid

Sediment

Aqueous

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

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H2SO4

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NaOH

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H2SO4

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H2SO4

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

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HNO3

H2SO4

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NaOH

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H2SO4

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H2SO4

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NaOH

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HNO3

H2SO4

Other:

NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

Other:

NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

Other:

NaOH

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HNO3

H2SO4

Other:

NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

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NaOH

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HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Other:

NaOH

HCl

HNO3

H2SO4

Lot Number: A0EB50579

By Jason Burns

(Signature)

Concerning _____

The following discrepancies occurred: 1. 6 - 10 - 11 - 12

High Temp OK for LHTG & metals

16. SAMPLE PRESERVATION

$(CH_3COO)_2Zn/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
601 WWT (7)	7.2	5/5/10	YB
601 WWT (8)	7.2		
601 WWT (8)	DUP		

North Canton Facility

[illegible][illegible]

Discrepancies Cont'd:

[illegible]

END OF REPORT